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Tropical Island Herpetofauna

Origin, Current Diversity, and Conservation

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Biogeography of the amphibians and reptiles of the Andaman and Nicobar Islands, India

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Abstract

The Andaman and Nicobar Islands sprawl in a crescent from off the Myanmar coast to near Sumatra. Politically a part of Republic of India, with a few northern islands administered by Myanmar, the archipelago introduces Indo-Chinese and Indo-Malayan elements to the fauna of India, besides supporting high level of endemicity in the herpetofauna. Although herpetological explorations of these islands commenced over a century ago, new species in virtually every group of anuran amphibians and squamate reptiles have been added to the fauna. Faunal revisions are incomplete, and several cryptic species remain to be named.

In general, the herpetofauna of the Andamans is considered to be of Indo-Chinese affinities, being a subset of that of Rakhine (Arakan) Yomas of Myanmar, resulting from the connection of these islands to the mainland during lowered sea levels associated with the Late Pleistocene glaciation. On the other hand, the herpetofauna of the Nicobars is considered to be oceanic in nature, with Indo-Malayan affinities, and established largely through waif dispersal across the Great Channel from Sumatra.

The larger islands show greater species richness of amphibians and reptiles, for not only supporting a higher habitat diversity, but also the presence of human commensals and species introduced deliberately by humans. For the size of land area, the islands of the Central Nicobars appear to have the highest proportion of endemic snake species, perhaps on account of being the most geographically isolated.

The Protected Areas System in the Andaman and Nicobar Islands is small, and target mostly marine/coastal species and habitats. Relatively little emphasis has been placed on the terrestrial fauna, and several endemics reported from these islands have not been seen since the original description. Large tracts of forested islands, especially those shown here to be of biogeographic significance, need be brought under the Protected Areas System in order to conserve the unique biota of these islands for all time.

Keywords: Andaman and Nicobar Islands; India; Amphibians; Reptiles; Biogeography; Conservation.

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